

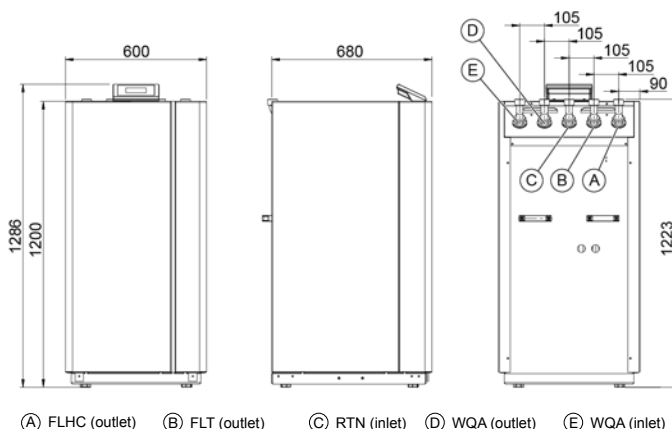
TERRA 14 HPLA

MONOVALENT HEATING SYSTEM WITH BRINE AS HEAT SOURCE

ORDER NUMBER: 265040

SERIES: M2

TF MAX. 65 °C



APPLIANCE DATA

Dimensions HxWxD	[mm]	1285x600x681
Hydraulic connection	[inch]	1 1/4"
Weight	[kg]	230
Casing colour		White/anthracite

SPECIFICATION

Phases/nominal voltage/frequency	[~]/[V]/[Hz]	3/400/50
Output factor cos φ		0,84
Fuse protection (tripping curve "C")	[A]	16
Max. operating current	[A]	9,70
Max. starting current/max. with soft start	[A]	60.00 / 30.00
Sound power level/sound pressure level (at 1 m distance)	[dBA]	50.00 / 42.00

HEATING MODE PERFORMANCE FIGURES (to EN 14511)

Standard point B0/W35

Heating output	[kW]	13,20
Total power consumption / operating current	[kW]/[A]	2.75 / 4.80
COP		4,80

Operating point B0/W50

Heating output	[kW]	12,10
Total power consumption / operating current	[kW]/[A]	3.90 / 6.70
COP		3,10

Operating point B0/W60

Heating output	[kW]	11,80
Total power consumption / operating current	[kW]/[A]	4.40 / 7.60
COP		2,70

CONDENSER

Type	Plate heat exchanger	
Material	Stainless steel 1.4301	
Max. refrigerant operating pressure	[bar]	45
Max. heat transfer medium operating pressure	[bar]	6
Heat transfer medium temperature differential	[K]	5
Application range	[°C]	65
Heat transfer medium	Water	
Test pressure	[bar]	54
Heat transfer medium flow rate	[m³/h]	2,27
Internal pressure differential	[mbar]	414
Flow meter (FM)	Internal	Installed as
Circulation pump heat sink (WNA)	Internal	Yonos Para HPS 25/7.5
Residual head I WNA external	[mbar]	63

REFRIGERANT CIRCUIT

Refrigerant	R410A
Refrigerant charge	[kg] 2,3

COMPRESSOR

Type	Scroll
Output levels	1
Speed	[rpm] 2900
Voltage/frequency	[V]/[Hz] 400/50

EVAPORATOR

Type	Plate heat exchanger	
Material	Stainless steel 1.4301	
Number	[pce]	1
Max. heat transfer medium operating pressure	[bar]	6
Max. refrigerant operating pressure	[bar]	12
Heat transfer medium temperature differential	[K]	3
Application range	[°C]	-5/+20
Heat transfer medium	Brine max. 30%	
Test pressure	[bar]	54
Heat transfer medium flow rate	[m³/h]	3,28
Internal pressure differential	[mbar]	-
Flow meter (FM)	Internal	Installed as
Circulation pump heat source (WQA)	Internal	Stratos Para 25/1-12
Residual head I WQA external	[mbar]	421

Hydraulic version			Electric immersion heater		3-way switching module	
			Internal	external	Internal	external
M2-1	M4-1		x		x	
M2-2	M4-2			x	x	
M2-3	M4-3		x			x
M2-4	M4-4	M6		x		x

RECOMMENDED ACCESSORIES

	Order no./type	Description	Pressure loss
Heat pump separating cylinders	min. PU300	min. PU300	-
DHW tank	min. SP300/SP350	30 l/kW at B0/W50	-
External plate heat exchanger (DHW heating)	911252 PHE 5007	Prim.: 1 1/4" Sec.: 1"	Prim.: 37 mbar Sec.: 48 mbar
3-way switching module internal	980196	-	-
3-way switching module external	290229	DN32 (1 1/4"). kvs 16	20 mbar
Electric immersion heater internal	980197	8.8 kW (2.9 / 2.9 / 2.9)	-
External electric immersion heater (heat pump buffer tank)	922509	9 kW	-
Brine collector set (shallow laying)	290170	ESK 7	Pressure loss 49 mbar incl. brine distributor

EXTRACTION CAPACITY ACC. TO VDI 4640

FOR SHALLOW LAYING

Soil conditions	Max. spec. extraction capacity at 1800 h/a	Max. spec. extraction capacity at 2400 h/a
Dry, non-cohesive soil	10 W/m ²	8 W/m ²
Cohesive soil, moist	25 W/m ²	20 W/m ²
Water-saturated soil with sand/gravel	40 W/m ²	32 W/m ²

FOR DEEP TRENCH LAYING

Soil conditions	Max. spec. extraction capacity at 1800 h/a
Cohesive soil, moist	100 W/m deep trench
Water-saturated soil	125 W/m deep trench

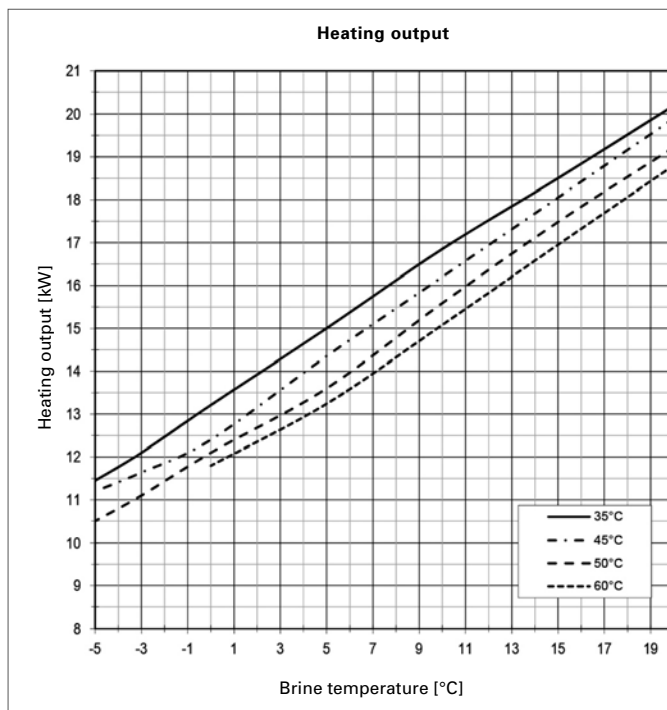
FOR GEOTHERMAL PROBES

Soil conditions	Spec. extraction capacity at 1800 h/a	Max. spec. extraction capacity at 2400 h/a
Dry sediment	25 W/m	20 W/m
Shale, slate	45 W/m	35 W/m
Firm rock with high thermal conductivity	84 W/m	70 W/m
Substratum with high groundwater flow	65-80 W/m	55-65 W/m

SIZING RECOMMENDATION WITH BRINE AS HEAT SOURCE

Pressure loss in connection line, incl. individual losses	Max. 100 mbar
Pressure loss in brine circuits or probes, incl. brine distributor	Max. 300 mbar

PERFORMANCE CURVES TERRA 14 HPLA



PRODUCT DATA ErP: TERRA 14 HPLA

		COLDER	MEAN	HOTTER
LOW TEMPERATURE		A++		
η _s		217	208	208
Energy consumption	[kWh]	5793	5053	3262
P rated	[kW]	13	13	13
SCOP		5,62	5,40	5,41
MEDIUM TEMPERATURE		A++		
η _s		136	131	131
Energy consumption	[kWh]	7931	6862	4445
P rated	[kW]	12	12	12
SCOP		3,59	3,48	3,47
DHW		A		
η _{WH}		86	86	86
Energy consumption	[kWh]	1657	1657	1657
Draw-off profile		XL		
Tank losses	[W]	94		

		indoor	outdoor
Sound power level	[dBA]	50,0	-
Controller class with room remote control		VII	Controller contribution [%]
Controller class without room remote control		III	Controller contribution [%]

